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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/731,596

12/06/2000

Margaret S. Fyfield

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12/14/2004

LSI LOGIC CORPORATION

1621 BARBER LANE

MS: D-106

MILPITAS, CA 95035

EXAMINER

HUYNH, YENNHU B

ART UNIT

PAPER NUMBER

2813

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,596

Applicant(s)

FYFIELD, MARGARET S.

Examiner

Yennhu B. Huynh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 16-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 5-7 and 11-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Amendment filed on 7/19/04.

Election/Restrictions

Applicant's election without traverse of claims 1-15 in Paper filed on 1/20/04 is acknowledged.

Claims 16-20 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claims, there being no allowable generic or linking claim. Election was made without traverse in Paper filed on 1/20/04.

Information Disclosure Statement

The information disclosure statement is being considered by the examiner.

Oath/Declaration

Oath/Declaration filed on 12/6/00 is accepted.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 8-10, 14 & 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kitahata (US 6,686,753).

Kitahata disclose prober and apparatus for semiconductor chip, which includes:

-Re. claim 1: a semiconductor wafer 4, onto a probe fixture 10; retaining the wafer to the probe fixture in a position in which the front side of the wafer is initially facing up (fig.4 col. 6 lines 54-60; col. 7 lines 11-16, and col. 8 lines); extending a probe tip from the probe fixture into contact with a contact point of the IC , while the wafer is initially face up (fig. 6A, col.8 lines 11-13 and fig. 7 col. 8 lines 41-48); optically 11 (fig. 6A) examining the IC while the wafer is retained in the probe device (col. 7 lines 42-45).

-Re. claims 2 & 4: Kitahata also disclose probe tip extends into contact with a contact point of the IC to cause the back side of the wafer to face upward by face down the plate 7 of the probe fixture (fig. 6B), and viewing the back side of the wafer while optically examining the IC by the optical system, and retain the wafer in a recess of the probe fixture initially and after turning over the probe fixture (fig. 6B)

-Re. claim 3: electrically input probe to supply power to the probe before turning the probe fixture over (col.8 lines 18-22).

-Re. claim 8: supporting 7a for the entire probe above the wafer when the probe tip extends into contact with the IC (fig. 4 col. 6 & 7 lines 64-5).

-Re. claim 9: connecting the probe to a probe adjustment device 3, and supporting the adjustment device 2 above the wafer 1 (fig. 6A).

-Re. claim 10: adjusting the position of the probe tip 6 on the contact surface 4 of the IC by manipulating the position adjustment device screw 5a while the position adjustment device is supported above the wafer 1 (col. 8 lines 9-13 fig. 6A).

-Re. claim 14: optically examining the IC on the wafer using a photoemission detection microscope (col. 1 lines 1-23 or col. 8 lines 6-8).

-Re. claim 15: placing the probe fixture a platen 5 of a test station and retain the probe fixture to the platen (fig. 6A).

Allowable Subject Matter

Claims 5-7 & 11-13 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: Prior art do not disclose or suggest a method for probing a semiconductor wafer, which include applying one of reduced pressure or vacuum to wafer to retain the wafer in the recess or its position (cl.5); retaining peripheral edges of the wafer on a supporting surface, and applying the one of the reduced pressure or vacuum to the peripheral edges of the wafer through holes in supporting surface (cl.6); communicating the vacuum through the probe fixture to the holes in the supporting surface (cl.7);_extending a rail across and above the wafer retained in the probe fixture, and supporting the entire probe from the

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rail above the wafer (cl.11); adjusting the position of the probe tip relative to the wafer by moving the entire probe along the trail (cl.12); connecting a pair or second parallel rails to the probe fixture to extend on opposite sides of the recess and generally transverse to the rail first aforesaid; movably connecting the first rail to the pair of the second rails; and moving the first rail along the pair of second rails to position the entire probe above the wafer (cl.13).

The above limitations for claims 5-7 & 11-13 are neither anticipated nor rendered obvious over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection, with Kitahata (US 6,686,753B1).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yennhu B Huynh whose telephone number is 571-272-1692. The examiner can normally be reached on 8.30AM-7.00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached on 571-272-1702. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-7724.

YNBH,
110804


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800